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THE WILD FLOWER PRESERVATION IDEA IS ONE  
OF PRACTICAL VALUE\*

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Our attention has been directed most pointedly within recent years to the necessity for the conservation of all those natural resources which have to do with the economic life of the state and nation. It is an urgent and pressing need and calls for broad and effective legislation.

Not less important, perhaps, but from a different point of view, is the need of conserving or preserving all forms of wild life which contribute so richly to the mental stimulus of our people, and which add to the recreational value of our woods, forests and fields; of these, the wild flowers form a not inconsiderable part. To some people the value of our great out-of-doors depends upon fishing and hunting game birds and animals; but it is important that we also recognize that even a greater and constantly increasing number of people derive the greatest value during their hours of leisure and in their vacations from the study of plant and bird life and the habits of animals. Such recreational studies are powerful contributions to peace of mind, happiness, equanimity, and a broader, more sympathetic outlook upon life.

Our vacation playgrounds, whether they are National Parks, State reserves or just plain unprotected wild country have a value that should not be measured in money units, but by their indirect influence upon the lives and activities of those who enjoy the ad-

\* Abstract of an illustrated lecture given at a joint meeting of the Torrey Botanical Club and the Wild Flower Preservation Society, at the New York Botanical Garden, May 26, 1920.

vantages for recreation that they afford—and the automobile with the improved highways has opened the door to thousands who never before were able to appreciate the beauties of nature.

This for lack of a better name we may designate as the esthetic



value of nature, and I think few persons will deny that in the long run it works for our good.

There is another aspect of the situation, one which borders on the economic. It is based on the fundamental and well-known fact that all of the elements of nature are closely interwoven and interdependent and that the loss of even a part of one entails the

corresponding loss of the others. It is easier to destroy plant life than any other form of wild life. The result is that the so-called "balance of nature" is seriously disturbed, and that all animals, including the birds dependent for food upon the destroyed plants, and the insects correlated with them, must also disappear—by death or by retreat to regions still primeval. It would take too much space to go into details, but I think that a very direct connection can be traced between the diminishing wild flowers and the scarcity of many desirable species of birds and animals, as well as the unwelcome increase of undesirable forms of insects. The destruction or wholesale gathering of wild flowers disturbs the balance of nature and their place is taken by weeds. There must follow a change in the insect and bird life, and in this readjustment some species of insects, animals and adventive plants become pests, accomplish great damage, and cause the expenditure of large sums of money for control measures.

The automobile is a great factor in our modern life for pleasure and for good, but it is also a great factor in the more rapid destruction of wild flowers, by those thoughtless persons who cannot be satisfied with seeing wild flowers at home in their incomparable surroundings, but needs must uproot, break down and gather them by the armful. The only satisfaction to be gained is a few brief hours of doubtful pleasure which the flowers may yield from bowls and vases. They then go to join the despised contents of the garbage can. Where they formerly grew in the woods, their beauty will not delight the passerby again for many years, perhaps never again in that spot if the destruction was sufficiently complete. By such methods have many of our byways and woodlands, formerly so attractive with their wealth of true Americans, become the abiding place of burdock, thistle, mustard, ragweed, and numerous other obnoxious aliens. Even more regrettable is the fact that the disturbance does not end with the mere change of plant life. The insects, animals and bird life also suffer a marked change, adding nothing to the attractiveness of such byways and woodlands.

Any effort toward the preservation of wild flowers is therefore

also an effort toward the preservation of all wild life, and the value of such efforts toward preservation is both economic and practical.

The diminished numbers of many of our most attractive wild flowers is of course due in large part to the undeniable needs of agriculture. However if we consider the diminishing abundance of attractive wild flowers in the still large areas of woodland and forest remaining in the agricultural areas we realize that there



are other and more important agencies. Chief among those agencies we must place fire. Often accounted as of little importance, occasional or frequent ground fires running through the dried leaves and litter of the woodland floor have been most important in the destruction of plants which are intolerant to fire.

Trailing arbutus, or mayflower, has been especially persecuted by ground fires; its manner of growth makes it almost impossible to gather without pulling it up by the roots and its attractiveness and delicate odor make it much sought after. Considering all these things it is little wonder that the trailing arbutus is now, a

very rare plant in many sections of the country where formerly it was common.

The list of wild flowers which have suffered most severely from the overzealous admirers is a long one, but space need be taken to mention only a few of the most important. They are the showy lady's-slipper, the moccasin flower, the rose pogonia, the arethusa, mertensia or blue bells, white water lily, American lotus, and the anemone or wind flower. To this list I am sure almost any lover of wild flowers could make many additions.

Education looking toward the right estimation and preservation of our diminishing forms of wild life ought to be more generally and widely extended, but even at its best probably would not reach many classes of people who are the worst offenders. Meanwhile it seems most desirable that we should use all our efforts in the establishment of national, state and private wild-life reserves, of both large and small size, in all sections of the land, where not alone shall the animal and bird life find safety and refuge but where also the native plant life shall be equally protected.

## THE RECEPTACLE OF *ACHILLEA MILLEFOLIUM* L.

BY MABEL L. MERRIMAN

The receptacle of the genus *Achillea* is given as flat or convex in Britton's manual of North American flora. Similarly in Gray's new manual the character of the receptacle is expressed by the word "flattish."

Clusters of *Achillea millefolium* L. brought in for class study in Oct., 1919, exhibited heads either markedly conical or oblong in shape in contrast to the usual flat-topped or slightly convex forms. It was thought at first that the difference in appearance might be due to a lengthening of the tubular flowers in the center of the head. A lengthwise section of the head showed that the receptacle had become much elongated, being narrowed to nearly the width of the stem axis, the section suggesting in its contour